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METHODOLOGY

The application of the methodology used in determining the supply requirements of the VC/NVA follows:

1. Strength of Forces

The current VC strength of 77,110 men includes 10,000 combat support types. The current strength of the NVA in South Vietnam is 15,880. The current actual number of NVA regular combat battalions is:

VC	87
NVA	<u>30</u>
Total	117

However, for purposes of determining logistical requirements, we have converted the total VC manpower of 77,110 men into 145 battalion equivalents of 530 men each; this battalion strength corresponds with the estimated NVA battalion strength used in this study.

The projected strength of the Communist force was calculated by using the MACV estimate that the Communists could expand to a maximum of 155 VC/NVA battalions by the last quarter of 1966. Of the 155 battalion force, we estimate that the VC will number 106 battalions and the NVA will number 49 battalions. The current 87 VC and 30 NVA battalions totaling 77,110 men and 15,880 men respectively, when projected to 106 VC and 49 NVA battalions results in a projected total strength of 93,810 VC and 25,970 NVA.

2. Levels of Combat

To determine the current level of combat, we researched ANNEX E (Significant Victories and Defeats) of all available USMACV Monthly Evaluation reports from 7 January 1965 to 7 January 1966 (the Monthly Evaluation for August 1965 is

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not available in Washington) and SITREPS from 7 January 1966 to February 1966. According to the information in the MACV Monthly Evaluations and the SITREPS, there were an estimated 600 VC/NVA battalion size actions during the last 6 months (approximately double the number of battalion size actions during the first 6 months of 1965). During the same period, the number of VC/NVA battalions averaged 97 per month (82 in September 1965 to 111 in February 1966).

3. Basic Unit Weapons

Table I gives the estimated breakout of weapons used in the VC battalion and their weights. (also used in the DIA logistical study dated May 1965.)

4. Basic Ammunition Load of the Unit

Table II gives the estimated basic load of ammunition for a VC battalion. (Also used in the DIA logistical study dated May 1965.)

5. Estimated Expenditure of Supplies

Table III gives the estimated expenditure of ammunition by a Communist force in combat. Using 7.9 tons as a standard measure for ammunition basic loads for VC/NVA units, it has been estimated that each day a unit is in action it expends about 1/3 of its basic load of ammunition; the combat factor used is that of an attack of a fortified position.

In Table IV we have presented the current logistical resupply requirements from abroad under 3 levels of combat. The current level of combat (the entire force engaged in combat 1 day out of every 30 days.):

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Class II (Including 5% weapons replacement) & IV for the VC

.0019 pounds per man per day includes the following:

- .01 pounds per man per day are the medical and signal requirements as determined in the DIA logistical of May 1965.
- .0019 pounds per man per day are the weapons replacement requirement (due to fair wear & tear, loss, etc.) based on 5% of the total estimated weapons (145 VC battalion equivalents X 7266.22 lbs of units weapons X 5% = 144.33 lbs. 144.33 lbs ÷ 77,110 VC = 0.0019 pounds per man per day).

Class II (Incl 5% weapons replacement) & IV for the NVA

.5019 pounds per man per day includes the following:

- .5 pounds per man per day for all Class IV requirements for NVA
- .0019 pounds per man per day (same as for VC above)

Class V for VC

The 145 VC battalion equivalents X 7.9 tons of ammunition per battalion = 1145.5 tons. 1145.5 tons ÷ 381.8 tons ammunition (1/3 of basic load) expended each day that the entire force is engaged in combat: 381.8 tons ÷ 30 days = 12.73 tons expended each day for 30 days to maintain a combat level in which the entire force is engaged in action 1 day out of every 30 days. 12.73 tons ÷ 77,110 = .33 pounds per man per day. In the DIA logistical study dated May 1965, the pounds per man per day requirement for ammunition was .06 pounds per man per day. The figure of .33 pounds per man per day used in our current computations is considered more realistic and is based on more complete reporting of information on the current level of combat.

Class V for NVA

NVA Class V requirements of .5 pounds per man per day were computed in the DIA logistical study prepared in May 1965. See Table V.

The pounds per man per day requirements when the level of combat is 1 day out of every 7 days are the figures resulting from an exchange of cables between DIA and J2-MACV on 14 December 1965 subsequent to the J2-MACV, Sec Def Briefing, dated 28 November 1965.

The pounds per man per day requirements when the level of combat is 1 day out of every 15 days is an interpolation of the requirements for 1 day out of every 7 days and 1 day out of every 30 days.

In Table VI we have presented the resupply requirements when the Communist force reaches a level of 155 VC/NVA battalions for 3 levels of combat.

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TABLE I
VIET CONG INFANTRY BATTALION WEAPONS (CHICOM WEAPONS)

	<u>Number of Weapons</u>	<u>Weight per Weapons</u>	<u>Total Weight per Battalion</u>
RIFLE	102	8.8 lbs	897.6 lbs
CARTRIDGE	313	8.6 lbs	2,691.8 lbs
ASSAULT GUN	34	9.48 lbs	322.32 lbs
M2-12.7mm	20	83.5 lbs	1,670.0 lbs
RR-57mm	10	55.0 lbs	550.0 lbs
RL-40mm	5	6.0 lbs	30.0 lbs
MORTAR - 60/61mm	11	44.5 lbs	489.5 lbs
MORTAR - 81/82mm	5	123.0 lbs	615.0 lbs
TOTAL	500		7,266.22 lbs = 3.6 (ST)

NOTE: Personnel Strength 530

TABLE II
VIET CONG INFANTRY BATTALION BASIC LOAD (AMMUNITION)

	No of weapons	No of rds per weapon	Weight per round	Total anno weight per wpn	Total anno weight per battalion
RIFLE	102	40	.6 oz	1.5 lbs	153.0 lbs
CARBINE	313	40	.6 oz	1.5 lbs	469.5 lbs
60MM ASSAULT GUN	34	2,160	.6 oz	81.0 lbs	2,754.0 lbs
PG - 12.7mm	20	1,760	4.5 oz	495.0 lbs	9,900.0 lbs
RPG - 76mm	10	10	12 lbs	120.0 lbs	1,200.0 lbs
M1 - 40mm	5	5	4 lbs	20.0 lbs	100.0 lbs
MORTAR - 60/61mm	11	20	3 lbs	60.0 lbs	660.0 lbs
MORTAR - 82/32mm	5	20	7.3 lbs	146.0 lbs	730.0 lbs
TOTAL	500				15,966.5 lbs 7.9+ (ST)

NOTE: Personnel Strength 530

Attack Expenditure - 1st Day

Type wdn	No wdns	Wt/rd	Rds/wdn	Lbs/day/wdn
RIFLE	102	.6 oz	20	75
CARBINE	313	.6 oz	6	36.0
LMG	34	.6 oz	12	72.0
MG 12.7	20	4.502 oz	50	225.1
RR 57	10	12 lbs	10	120.0
RL 40mm	5	4 lbs	5	20.0
60 MORTAR	11	3 lbs	70	210.0
81 MORTAR	5	7.3 lbs	70	511.0
				TOTAL 6304.6

Attack Expenditure - 2d Day

Type wdn	No wdns	Wt/rd	Rds/wdn	Lbs/day/wdn	Lbs/day/wdn	Lbs/day/wdn
RIFLE	102	.6 oz	15	56	57.0	57.0
CARBINE	313	.6 oz	3	11	33.0	33.0
LMG	34	.6 oz	100	3.65	124.0	124.0
MG 12.7	20	4.5 oz	30	8.5	170.0	170.0
RR 57	10	12 lbs	6	72.0	720.0	720.0
RL 40mm	5	4 lbs	3	12.0	60	60
60 MORTAR	11	3 lbs	40	120.0	1320.0	1320.0
81 MORTAR	5	7.3 lbs	40	292.0	1460.0	1460.0
					TOTAL	2344.0

Average expenditure 1st & 2d day = 5.37 tons/day
 $\frac{2344}{2} = 1172$ tons on 1st & 2d expenditures
 $\frac{2344}{2} = 1172 \div 2 = 5.37$ tons/day

CURRENT LOGISTICS POSITION
(Supply, Water, Fuel, Ammunition)

SUMMARY	TONS PER DAY	LBS/TON AVERAGE	TOTAL
1. Each battalion engaged in combat 1 day in 30	<u>77,110</u>	<u>15,830</u>	
Class of Supply			
Class I & IV*	negligible	.0119	.5919
Class II & V**	4588	.33	3.9850
Class V (ammo)***	12,7300		3.9700
Total	13,1888		7.9550
2. Each battalion engaged in combat 1 day in 15			
Class of Supply			
Class I & IV*	negligible	.0439	.23,6350
Class II & V**	6925	.4	5,5580
Class V (ammo)***	4,220		29,3930
Total	17,1145		
3. Each battalion engaged in combat 1 day in 7			
Class of Supply			
Class I & IV*	negligible	.1769	.23,8350
Class II & V**	8203		15,8300
Class V (ammo)***	6,6515	1.2139	39,7155
Total	53,4718		

* Includes 18,000 combat support troops.

** Includes 5% of unit load of weapons for replacements.

*** Class I supplies for porters and infiltrators (6,000 and 4,500 respectively).

TABLE V
PROJECTED LOGISTICAL RESUPPLY REQUIREMENTS FROM ABROAD
(Short Tons Per Day)

STRENGTH	VC	Lbs./Man/Day	FVA	Lbs./Man/Day	Total
1. Each battalion engaged in combat 1 day in 30	93,810*		25,970		
Class of Supply					
Class I & II	negligible				
Class III & IV**	.0119				
Class V (ammo)	.33				
Total	15.4786				
	16.0367				
2. Each battalion engaged in combat 1 day in 15					
Class of Supply					
Class I & II	negligible				
Class III & IV**	.0439				
Class V (ammo)	.4				
Total	2.0591				
	18.7620				
	20.8217				
3. Each battalion engaged in combat 1 day in 7					
Class of Supply					
Class I & II	negligible				
Class III & IV**	.1769				
Class V (ammo)	1.2100				
Total	8.2974				
	56.7550				
	65.0524				

* Projects 21,260 combat support troops.
** Includes 25% of unit load of weapons for replacement
 and Class I supplies for 6,000 porters and 4,500 infantry fighters.

TABLE VI

SUPPLY REQUIREMENTS FOR NVA DIVISIONS OPERATING IN SOUTH VIETNAM UNDER VARYING COMBAT CONDITIONS

	<u>Light Combat**</u>	<u>Conditions as of May 1965</u>
Class I	15.9 (3) ***	5.31 (1) ***
Class II & IV	15.9 (3) ***	2.7 (.5) ***
Class III ***	5.9 (1.7) ***	1.25 (.23) ***
Class V	29.3 (5.5) ***	2.7 (.5) ***
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	67.0 (13.2) ***	11.96 (2.23) *** or approx 12
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* NVA Division strength 10,632 men.
** 1 day of combat out of every 3 days.
*** Pounds per man per day
**** Includes POL required to move supplies from North Vietnam through Laos to the South Vietnamese Border.